

ABSTRACT

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This invention is related to an adhesive composition which may be used to bond or seal tissue in vivo. The adhesive composition is readily formed from a two component mixture which includes a first part of a protein, preferably a serum albumin protein, in an aqueous buffer having a pH in the range of about 8.0-11.0 and a second part of a water-compatible or water-soluble bifunctional crosslinking agent. When the two parts of the mixture are combined, the mixture is initially a liquid which cures in vivo on the surface of tissue in less than about one minute to give a strong, flexible, pliant substantive composition which bonds to the tissue and is absorbed in about four to sixty days. The adhesive composition may be used either to bond tissue, to seal tissue or to prevent tissue adhesions caused by surgery.

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Barrows et al.

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[54] ADHESIVE SEALANT COMPOSITION

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[58] Field of Search 514/21, 2, 4; 530/350, 530/362, 363, 366, 830; 424/77, 78.02, 78.06, 422, 423, 428; 524/54.1

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This invention is related to an adhesive composition which may be used to bond or seal tissue in vivo. The adhesive composition is readily formed from a two component mixture which includes a first part of a protein, preferably a serum albumin protein, in an aqueous buffer having a pH in the range of about 8.0-11.0 and a second part of a water-compatible or water-soluble bifunctional crosslinking agent. When the two parts of the mixture are combined, the mixture is initially a liquid which cures in vivo on the surface of tissue in less than about one minute to give a strong, flexible, pliant substantive composition which bonds to the tissue and is absorbed in about four to sixty days. The adhesive composition may be used either to bond tissue, to seal tissue or to prevent tissue adhesions caused by surgery.

17 Claims, 3 Drawing Sheets